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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/509,381	03/24/2000	YUTAKA YAMAUCHI	1034-00	1831

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IP DEPARTMENT OF PIPER RUDNICK LLP
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18TH AND ARCH STREETS
PHILADELPHIA, PA 19103

EXAMINER

ARNOLD JR, JAMES

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 02/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/509,381

Applicant(s)YAMAUCHI ET AL. **Examiner**

James Arnold, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4 January 2002</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyatsu et al. (JP 53108103A).

The Miyatsu reference discloses a blended coal having greater than 0.8% mean coalification degree, a low maximum fluidity, a binder of 5-15%; and thermal treatment which forms coke. See Abstract.

The reference does not disclose a coal blend containing not less than 60 wt% of medium coking coal having a content of inert component of not less than 30% and a middle coalification degree. The reference does not disclose an equilibrium moisture content of not less than 3.5%; a mean reflectance as a coalification degree of 0.9-1.1 and a maximum fluidity as a coking property of not less than 3.0; a coal blend consisting of 60-95 wt% of the medium coking coal

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having the middle coalification degree and low fluidity and 5-40 wt% of a high coalification hard coking coal and/or a high coalification medium coking coal having a higher coalification degree or 5-40 wt% of a middle-high fluidity hard coking coal and/or a middle-high fluidity medium coking coal having a larger maximum fluidity. The reference does not disclose a high coalification hard coal and medium coking coal having a mean reflectance of not less than 1.3; a middle-high fluidity coking coal and medium coking coal having a maximum fluidity of not less than 3.0; and coke as a product having a tumbler strength of not less than 83%.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a coal blend containing not less than 60 wt% of medium coking coal having a content of inert component of not less than 30% and a middle coalification degree because Miyatsu discloses a mean coalification degree of greater than 0.8% which reflects diversity in coal amounts and it encompasses various types of coking coals including middle and high and because an inert component does not affect the activity of coal and therefore it would be appropriate to adjust the percentages of inert component to any amount effective for coke production. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize an equilibrium moisture content of not less than 3.5%; a mean reflectance as a coalification degree of 0.9-1.1 and a maximum fluidity as a coking property of not less than 3.0; a coal blend consisting of 60-95 wt% of the medium coking coal having the middle coalification degree and low fluidity and 5-40 wt% of a high coalification hard coking coal and/or a high coalification medium coking coal having a higher coalification degree or 5-40 wt% of a middle-high fluidity hard coking coal and/or a middle-high fluidity medium coking coal having a larger maximum fluidity because these variables reflect the properties of the coal

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used and because Miyatsu suggests that a diversity of coals may be used and because fluidity changes with the type of coals used. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a high coalification hard coal and medium coking coal having a mean reflectance of not less than 1.3; a middle-high fluidity coking coal and medium coking coal having a maximum fluidity of not less than 3.0; and coke as a product having a tumbler strength of not less than 83% because Miyatsu suggests that a diversity of coals may be used and the tumbler strength reflects the properties that coke would be expected to have after utilizing the coal blend for coke production.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sugimura et al. (USPN 4,243,488). The Sugimura reference discloses a method for manufacturing coke using coal blends.

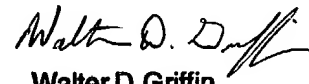
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Arnold, Jr. whose telephone number is 571-272-1443. The examiner can normally be reached on Monday-Thursday 8:30 AM-6:00 PM; Fridays from 8:30 AM-5:00 PM with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ja
February 9, 2003


Walter D. Griffin
Primary Examiner